

EXAMINER'S AMENDMENT

1. Applicants' amendment filed July 10, 2009 is acknowledged and has been entered. Claims 1 and 3 have been amended. Claim 2 has been canceled. New claims 8-11 have been added. Claims 1 and 3-11 are now pending in the instant application. All rejections have been withdrawn in view of Applicants' amendment to the claims, comments and/or the amendment to the claims set forth in this Examiner's amendment.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ann M. Skerry, 45655 on March 10, 2010.

3. The application has been amended as follows:

1. (Previously Presented) An immunostimulating agent which comprises a complex of an immunostimulating oligonucleotide of 8 to 100 nucleotides which contains an unmethylated CpG motif and a polysaccharide having β -1,3-bonds.

2. (Cancelled).

3. (Previously Presented) The immunostimulating agent of claim 1, wherein the phosphoric acid backbone of the oligonucleotide is phosphorothioate-modified or phosphorodithioate-modified.

4. (Original) The immunostimulating agent of claim 1, wherein the polysaccharide having β -1,3-bonds is β -1,3-glucan or β -1,3-xylan.

5. (Original) The immunostimulating agent of claim 1, wherein the β -1,3- glucan is selected from among schizophyllan, curdlan, lentinan, pachyman, grifolan, laminaran and scleroglucan.

6. (Original) The immunostimulating agent of claim 1, wherein the polysaccharide is modified with nucleic acid-binding functional group and/or cell membrane-affinitive functional group.

7. (Original) The immunostimulating agent of claim 1, wherein the complex of the oligonucleotide and the polysaccharide is of a triple helix structure formed through hydrogen bonds and hydrophobic interactions.

8. (Previously Presented) The immunostimulating agent of claim 1, wherein said unmethylated CpG motif is selected the group consisting of AACGTT, AGCGTT, GACGTT, GGCGTT, AACGTC, AGCGTC, GACGTC, GGCGTC, AACGCC, AGCGCC, GACGCC, GGCGCC, AACGCT, AGCGCT, GACGCT, and GGCGCT.

9. (Currently Amended) The immunostimulating agent of claim 1, wherein said immunostimulating oligonucleotide is selected from the group consisting of:

accgataccggtgccggtgacggcaccacg	(SEQ ID NO 7);
accgatagcgctgccggtgacggcaccacg	(SEQ ID NO 8);
accgatgacgtcgccggtgacggcaccacg	(SEQ ID NO 9);
accgattcgcgagccggtgacggcaccacg	(SEQ ID NO 10);
ggggggggggcgatcggggggggggggg	(SEQ ID NO 11);
gggggggggggacgatcgtcgggggggggg	(SEQ ID NO 12);
gggggggggggaacgttgggggggggggg	(SEQ ID NO 13);
GAGAACGCTCGACCTTCGAT	(SEQ ID NO 14);
TCCATGACGTTCTGTATGCT	(SEQ ID NO 15); <u>and</u>
TCTCCAGCGTGCGCCAT	(SEQ ID NO 16); [and
GGgtcaacgttgaGGGGGg	(SEQ ID NO 17);]

wherein capital letters denote a thiolated DNA.

10. (Cancelled).

11. (Currently Amended) The immunostimulating agent of claim 1 [10], wherein the polysaccharide to be complexed is provided with nucleic acid-binding functional groups formed by periodate oxidation of 1,6-glucopyranoside branches followed by reductive amination.

4. Claims 1, 3-8 and 11 have been allowed and renumbered 1-9 respectively.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. M. Minnifield whose telephone number is 571-272-0860. The examiner can normally be reached on M-F (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert B. Mondesi can be reached on 571-272-0956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. M. Minnifield/
Primary Examiner, Art Unit 1645

CLEAN COPY OF ALLOWED CLAIMS

1. An immunostimulating agent which comprises a complex of an immunostimulating oligonucleotide of 8 to 100 nucleotides which contains an unmethylated CpG motif and a polysaccharide having β -1,3-bonds.
3. The immunostimulating agent of claim 1, wherein the phosphoric acid backbone of the oligonucleotide is phosphorothioate-modified or phosphorodithioate-modified.
4. The immunostimulating agent of claim 1, wherein the polysaccharide having β -1,3-bonds is β -1,3-glucan or β -1,3-xylan.
5. The immunostimulating agent of claim 1, wherein the β -1,3- glucan is selected from among schizophyllan, curdlan, lentinan, pachyman, grifolan, laminaran and scleroglucan.
6. The immunostimulating agent of claim 1, wherein the polysaccharide is modified with nucleic acid-binding functional group and/or cell membrane-affinitive functional group.
7. The immunostimulating agent of claim 1, wherein the complex of the oligonucleotide and the polysaccharide is of a triple helix structure formed through hydrogen bonds and hydrophobic interactions.
8. The immunostimulating agent of claim 1, wherein said unmethylated CpG motif is selected the group consisting of AACGTT, AGCGTT, GACGTT, GGCGTT, AACGTC, AGCGTC, GACGTC, GGCGTC, AACGCC, AGCGCC, GACGCC, GGCGCC, AACGCT, AGCGCT, GACGCT, and GGCGCT.
9. The immunostimulating agent of claim 1, wherein said immunostimulating oligonucleotide is selected from the group consisting of:

accgataccggtgccggtgacggcaccacg	(SEQ ID NO 7);
accgatagcgctgccggtgacggcaccacg	(SEQ ID NO 8);
accgatgacgtcgccggtgacggcaccacg	(SEQ ID NO 9);
accgattcgcgagccggtgacggcaccacg	(SEQ ID NO 10);
ggggggggggggcgatcggggggggggggg	(SEQ ID NO 11);
gggggggggggacgatcgtcggggggggggg	(SEQ ID NO 12);
gggggggggggaacgttggggggggggggg	(SEQ ID NO 13);
GAGAACGCTCGACCTTCGAT	(SEQ ID NO 14);
TCCATGACGTTCTGATGCT	(SEQ ID NO 15); and
TCTCCAGCGTGCCCAT	(SEQ ID NO 16);

wherein capital letters denote a thiolated DNA.

11. The immunostimulating agent of claim 1, wherein the polysaccharide to be complexed is provided with nucleic acid-binding functional groups formed by periodate oxidation of 1,6-glucopyranoside branches followed by reductive amination.